

# **I-90 Corridor Planning Study**

## **Bellevue to North Bend**

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Eastgate Subarea Plan

Citizen Advisory Committee

January 6, 2011

Bellevue City Hall

5:30 pm

# I-90 Corridor Plan: Bellevue to North Bend

Corridor Plans consider current and future population, employment, land use, and travel characteristics to identify near and long term cost effective multimodal transportation improvements that can be implemented over the next 20 -30 years as funding from variety of sources becomes available.





# Moving Washington is our three-pronged approach to fight congestion and combat climate change



**Adding capacity strategically**



**Operating roadways efficiently**



**Managing demand**

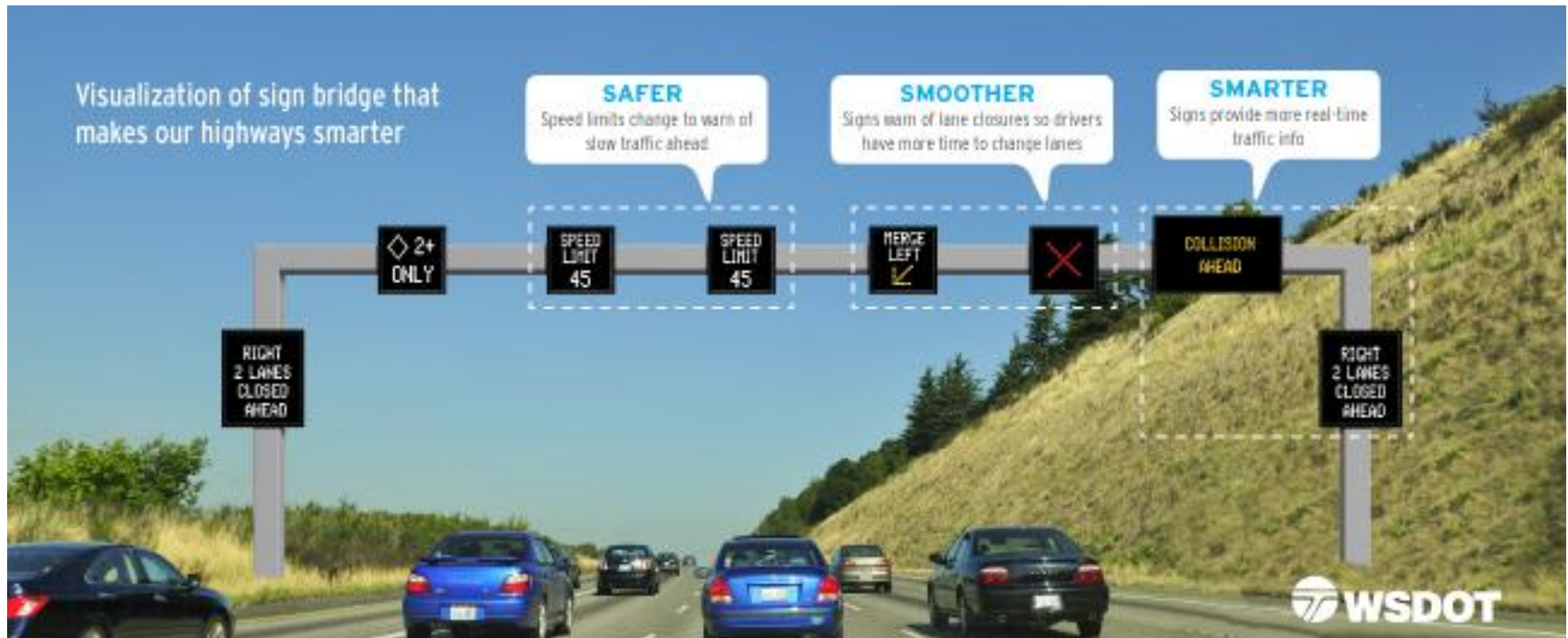
Adding new capacity to our currently over-stressed transportation system removes choke points and bottlenecks, completing critical corridors; improve reliability, throughput for freight, commuters and transit partners.

Maximizing the use of the existing system and using available technology to communicate with and direct traffic, improves the system's performance and generates revenue through variable pricing and other traffic management tools.

Providing more travel choices and options for people and freight helps improve the efficiency and effectiveness of our transportation system.

# Active Traffic Management: making I-90 smarter with variable speed limit and queue warning signs (Bellevue to Issaquah)

Planning Level Cost Estimate: \$52 Million



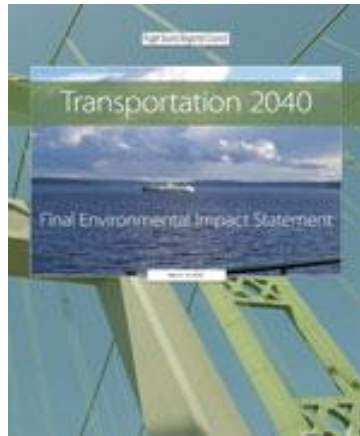
- Variable speed limits
- Lane control
- Automatic, instant traffic information

Signs every half mile warn of slower traffic and blocked lanes ahead to prevent collisions that cause at least 25% of congestion.

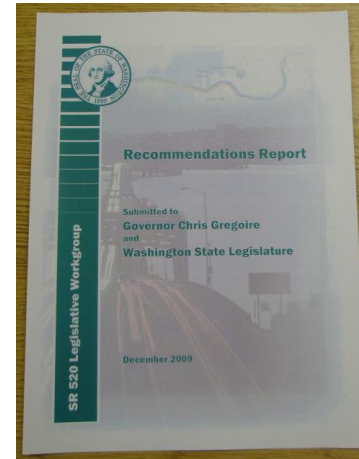


# Convert Existing HOV Lanes into High Occupancy Toll Lanes (HOT)

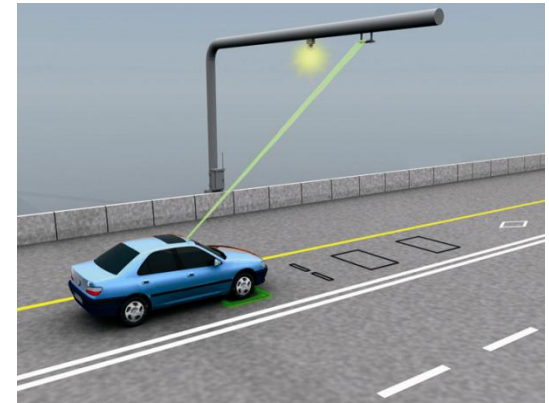
Planning Level Cost: \$14 M (\$2009)



**Transportation 2040 Policy  
(Adopted May 20, 2010)**  
"Implement tolling of the HOV  
System by 2020"



**December 2009 SR 520 Legislative  
Workgroup Recommendation:**  
*"The creation of, and early tolling of HOT  
lanes on I-90 as soon as is practicable"*



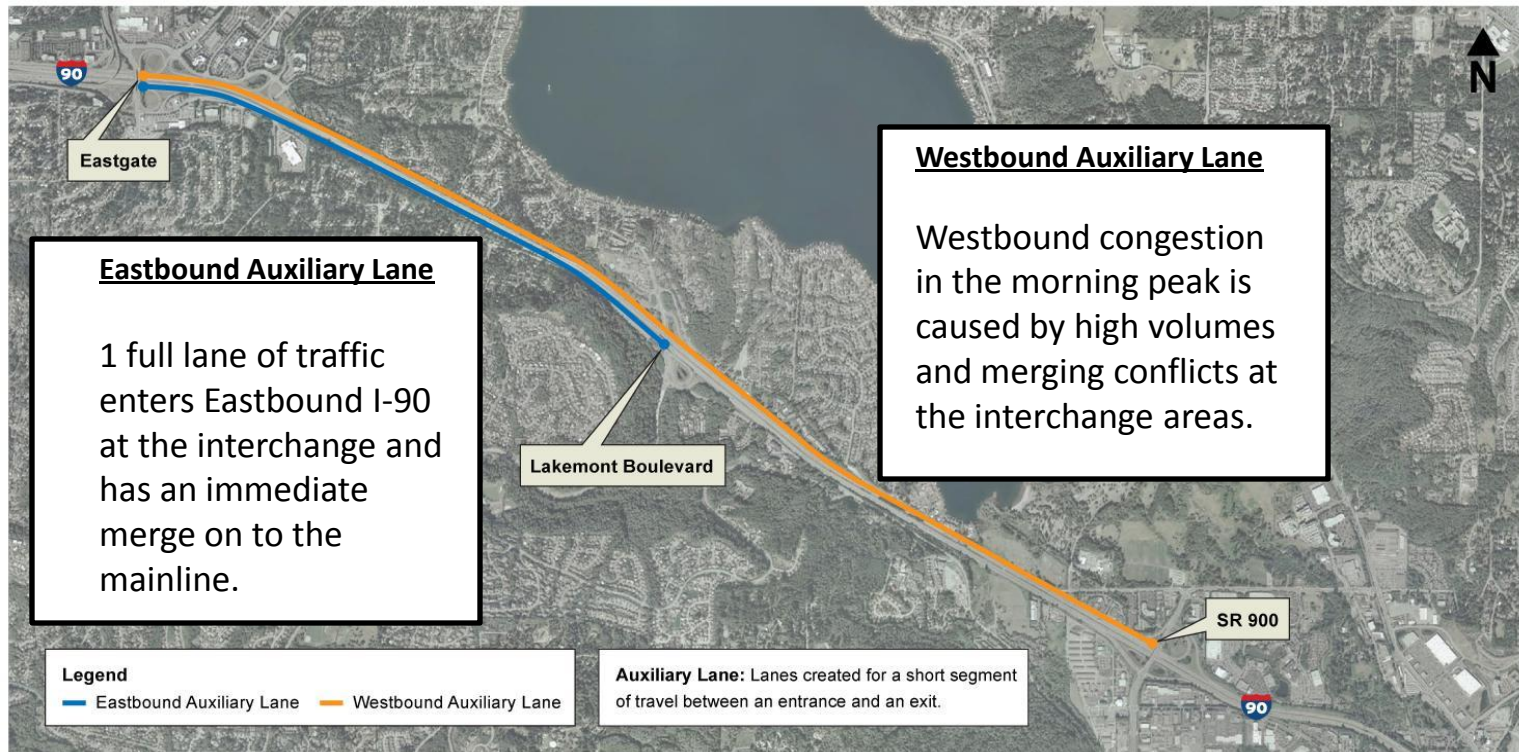
## Westbound Auxiliary/Add Lane: SR 900 to Eastgate Options

- Hard Shoulder Running w/ Active Traffic Management  
Planning Level Cost Estimate: \$18M (\$2009)
- Full Standards  
Planning Level Cost Estimate: \$94 M (\$2009)

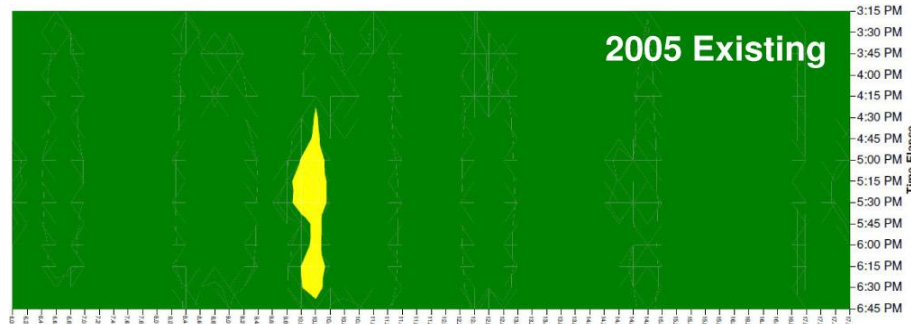
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## Eastbound Auxiliary /Add Lane: Lakemont to Eastgate Options

- Hard Shoulder Running with Active Traffic Management  
Planning Level Cost Estimate: \$13M (\$2009)
- Full Standards  
Planning Level Cost Estimate: \$22M (\$2009)



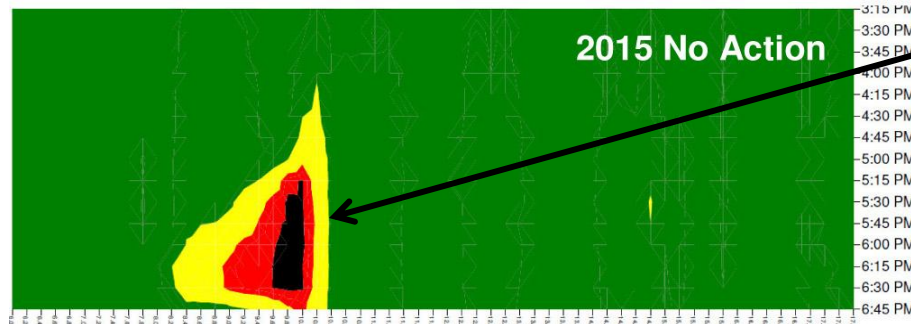
# I-90 Eastbound Speed Profile (2005 and 2015)



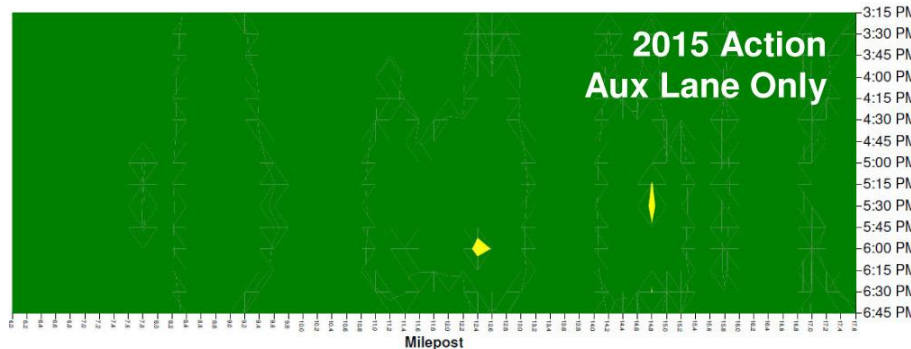
Max. Trav. Time: ~10 min  
 Avg. Trav. Time: ~10 min  
 Throughput: ~19,000  
 veh/3 hour

## Eastgate Interchange

1 full lane of traffic enters I-90 in the p.m. peak hours and has to merge into the through lanes in a very short distance. This merge causes congestion back up to Richards Road.

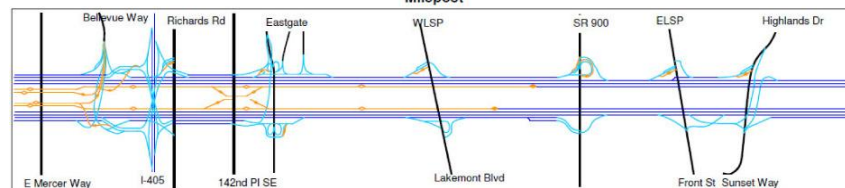


Max. Trav. Time: ~13 min  
 Avg. Trav. Time: ~10.5 min  
 Throughput: ~18,000  
 veh/3 hr



Max. Trav. Time: ~10 min  
 Avg. Trav. Time: ~9.5 min  
 Throughput: ~18,000  
 veh/3 hr

By providing an eastbound Auxiliary Lane, vehicles will have more space to enter the mainline traffic resulting a smoother merge and less congestion at this point.



**2005 & 2015 PM Peak  
 3:15 to 6:45 p.m.**

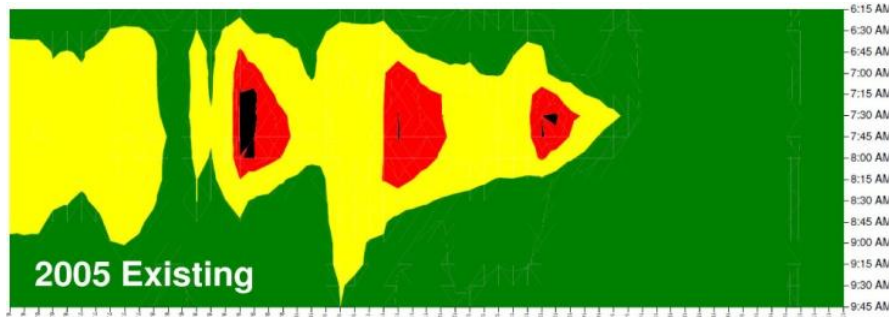
Bellevue



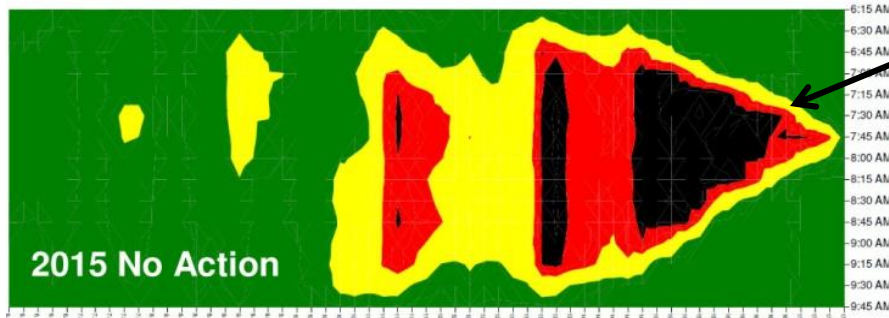
Issaquah **Eastbound Direction**



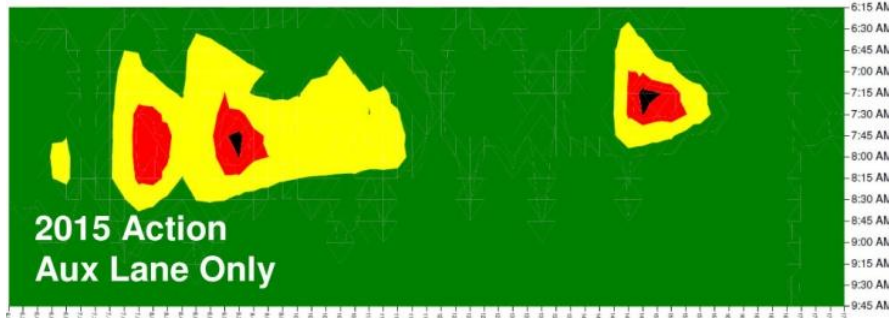
# I-90 Westbound Speed Profile (2005 and 2015)



Max. Trav. Time: ~17 min  
Avg. Trav. Time: ~12 min  
Throughput: ~17,500  
veh/3 hour



Max. Trav. Time: ~22 min  
Avg. Trav. Time: ~16 min  
Throughput: ~19,100  
veh/3 hr

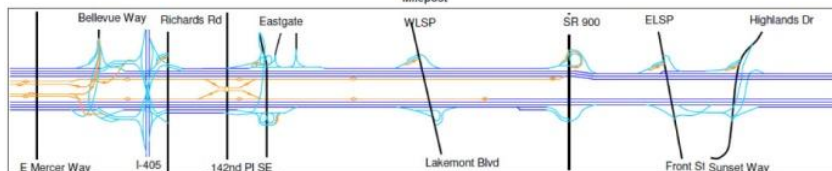


Max. Trav. Time: ~14 min  
Avg. Trav. Time: ~11 min  
Throughput: ~19,200  
veh/3 hr

## Front Street/SR 900 Interchanges

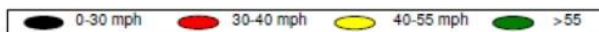
Because of the high volumes entering westbound I-90 in the morning peak hours and the east end HOV Terminus, congestion occurs between Front Street and the Lakemont Interchanges.

By providing a westbound Auxiliary Lane, drivers have more space to merge onto the mainline and there is room to for an HOV add lane near SR 900.



Bellevue

Issaquah



**2005 & 2015 AM Peak  
6:15 to 9:45 a.m.  
Westbound Direction**



# West Lake Sammamish Parkway Roundabouts

## West Lake Sam Roundabouts

Phase 1: Widen Existing Roundabout

Cost Estimate: \$4.1 M (\$2009)

Phase 2: Add Roundabout at  
the westbound ramp terminal (by 2030)

Cost Estimate: \$1.4 M (\$2009)



There are over 195 Roundabouts in Washington State and many more planned.

## Benefits of Roundabouts

- Reduces Delay – No stopping at red lights
- Improves Safety – No red light to beat (significant reduction in serious and fatal collisions)
- Less Expensive – No hardware, electricity and low maintenance

# Lakemont Eastbound Off- Ramp Modification

Lakemont Eastbound Slip Ramp (by 2030)  
Planning Level Cost Estimate: \$2.3M (\$2009)

Vehicles using the eastbound off-ramp at Lakemont will have an increasingly difficult time making a right hand turn on to Lakemont during the p.m. peak hours because of the heavy flow of southbound traffic on West Sammamish/Lakemont.

A slip ramp on the existing eastbound to northbound West Lake Sammamish off-ramp will prevent traffic from backing up on the off-ramp.



# Questions?

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## Project website:

<http://www.wsdot.wa.gov/planning/RDP/I90/EastgateTo465th>